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(56) Documents Cited
GB 2377342 A   GB 2352128 A
WO 2000/041428 A1   WO 2000/019170 A1

(58) Field of Search
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(54) Abstract Title
Method for automatically sending a message

(57) The user of a mobile communication device selects a criterion, such as that the mobile has arrived at a particular location, from a list of possible criteria displayed on the device and the device sends a user-defined message to a pre-selected subscriber when it is detected that the criterion is satisfied. A user may program a remote device to operate in the same manner. A time window may be defined for carrying out the method.
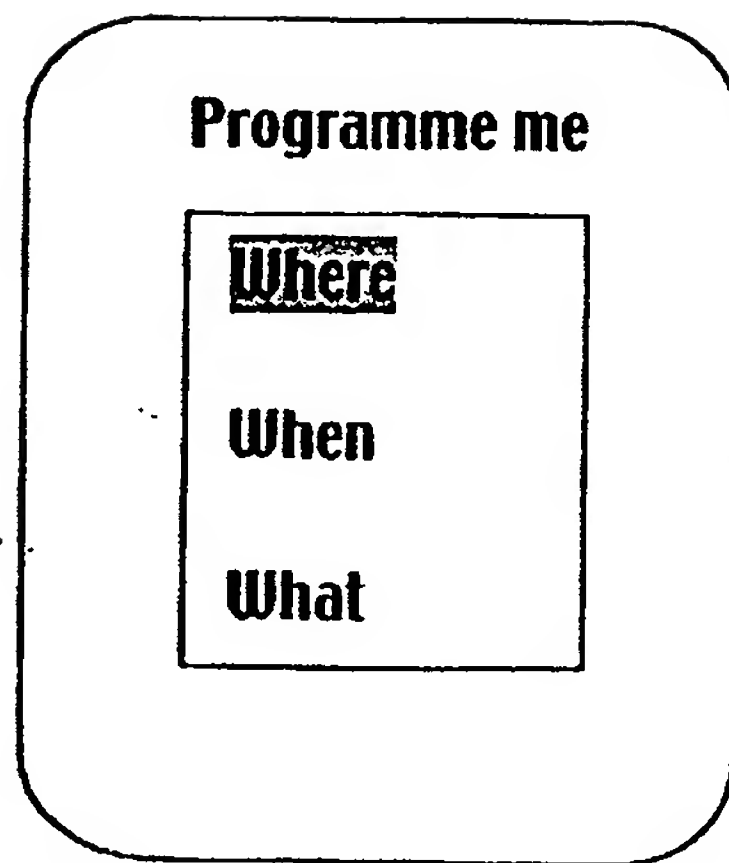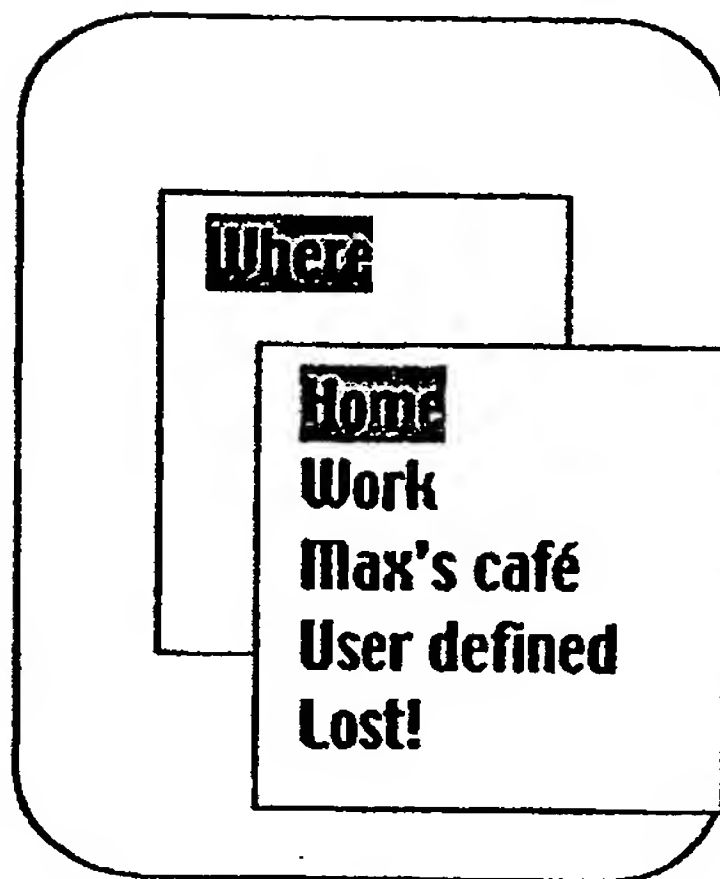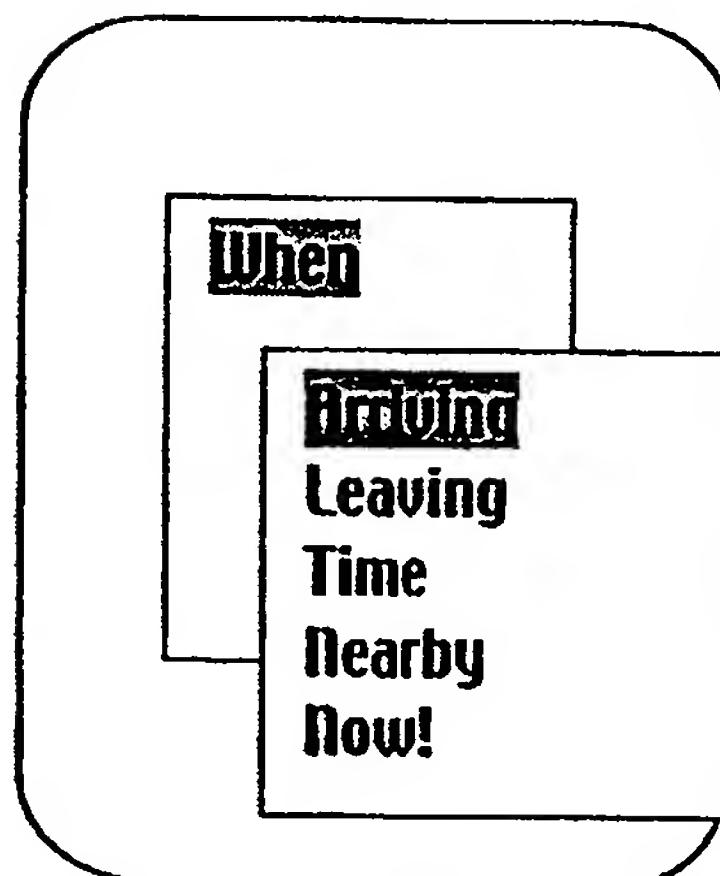
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Programme me

Where

When

What

Figure 1

Where

Home
Work
Max's café
User defined
Lost!

Figure 2

When

Arriving
Leaving
Time
Nearby
Now!

Figure 3

What

Message
Alert
Disable
Transfer
Where are you

Figure 4

Programme me

Who
Where
When
What
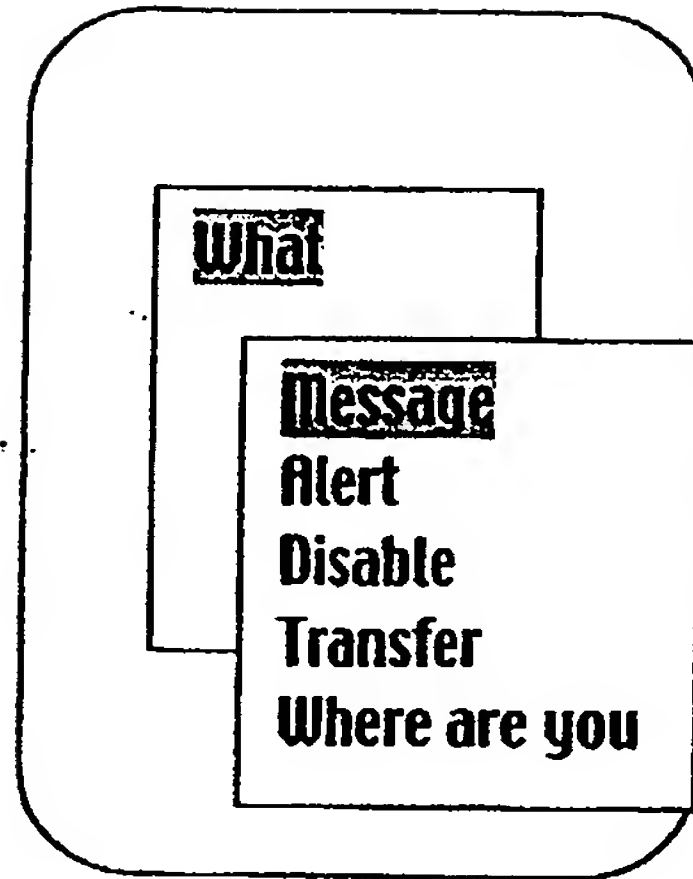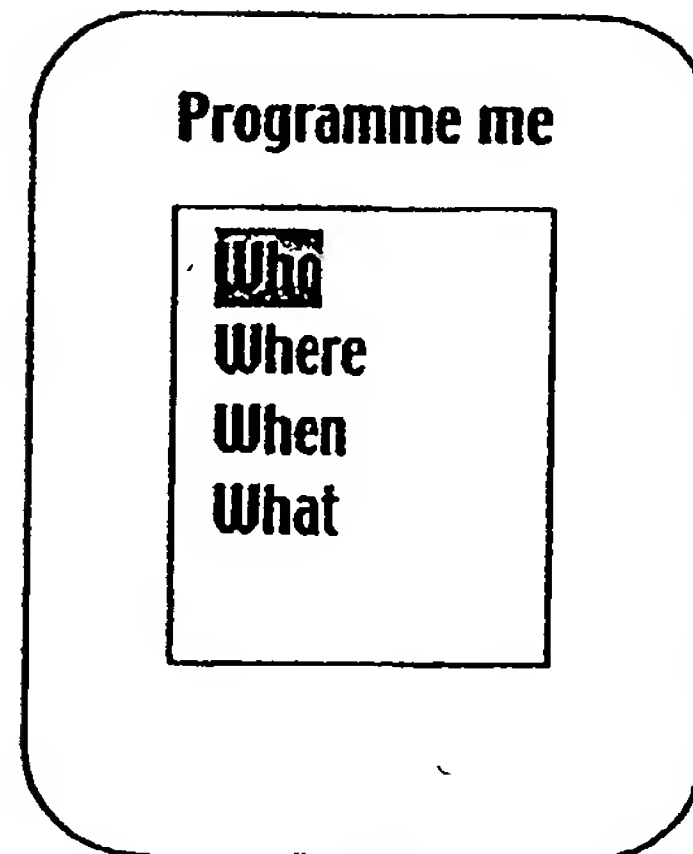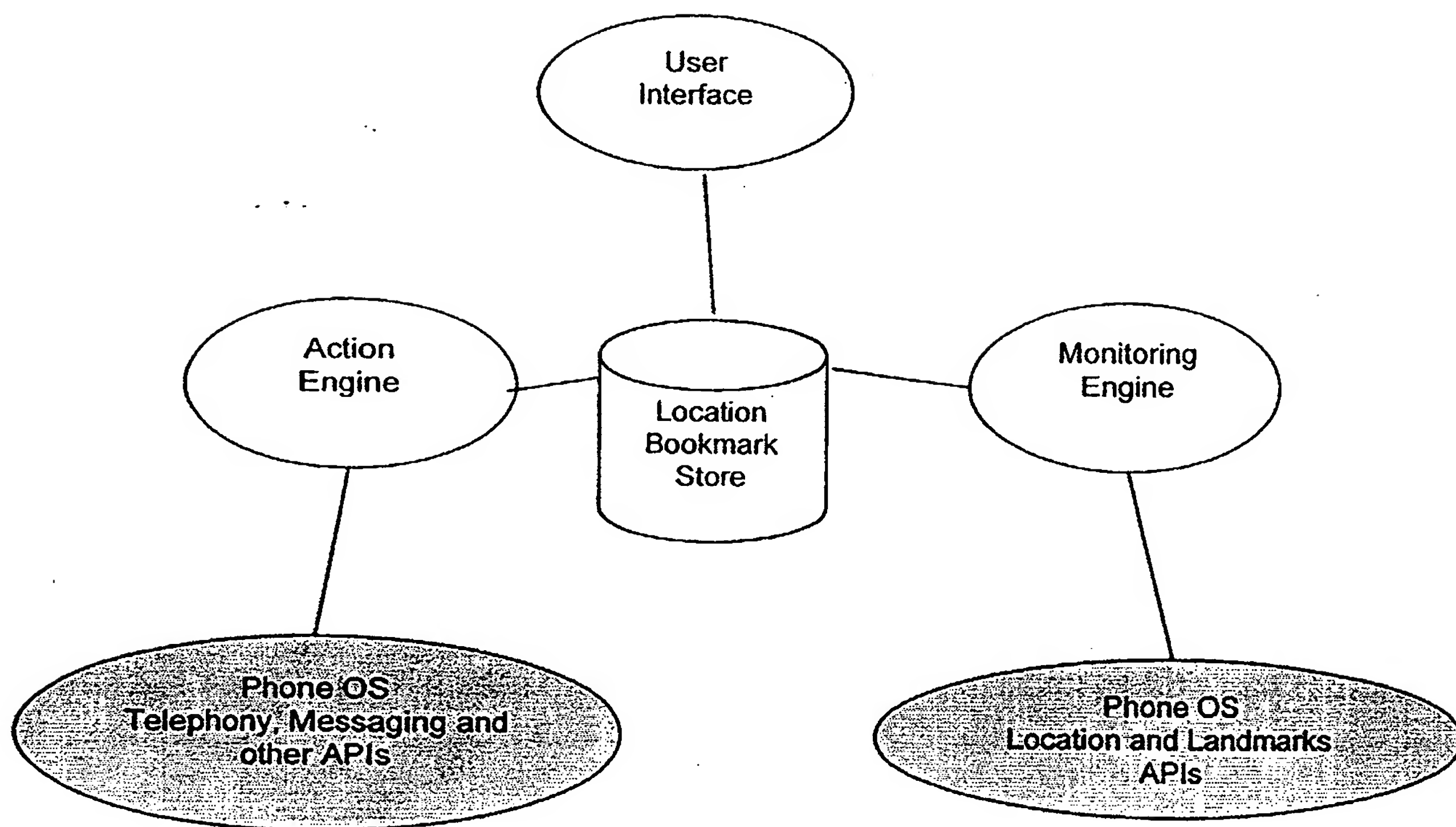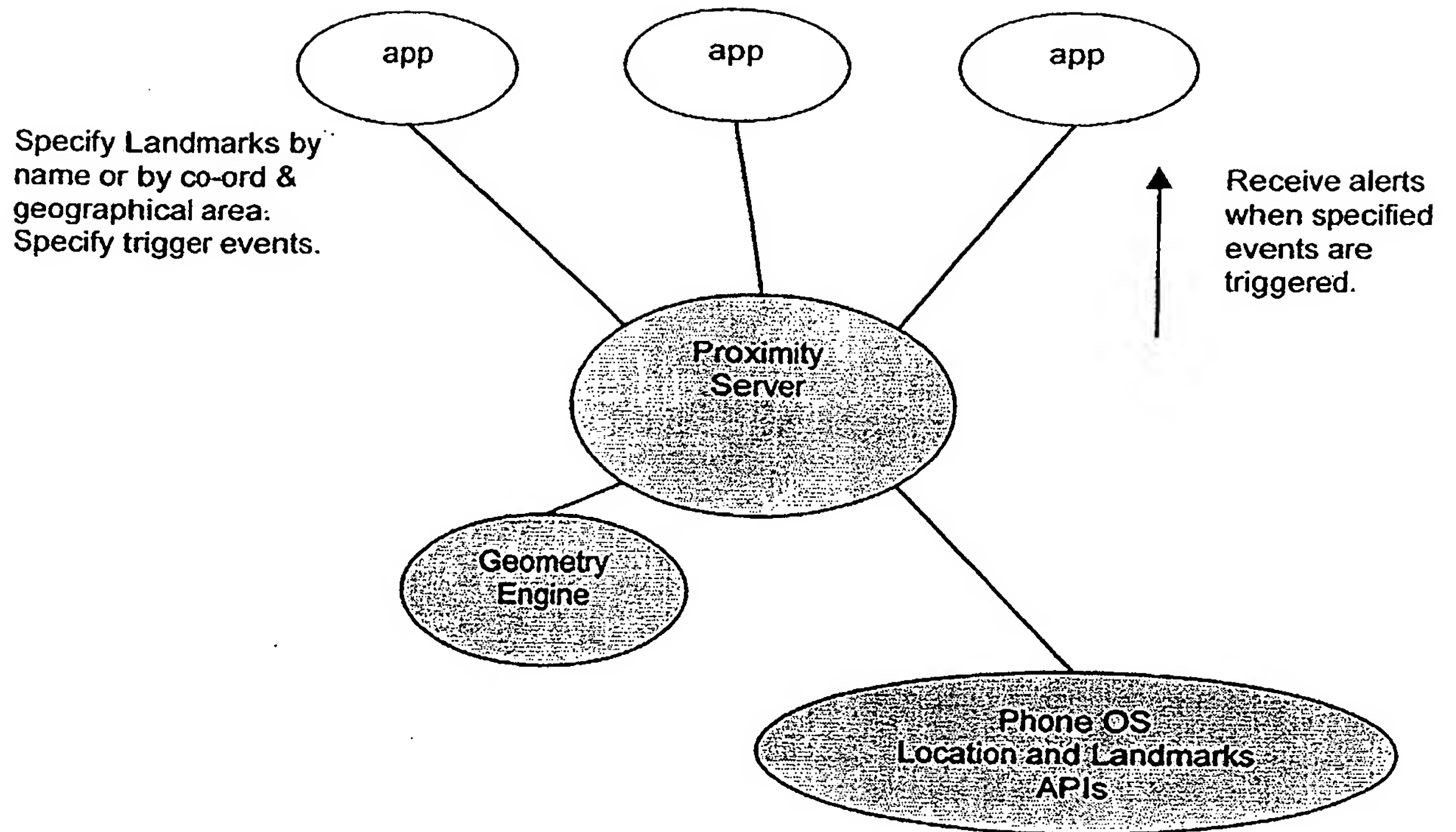
Figure 5

OS components are shaded

This functionality could also be delivered as platform functionality

Figure 6

Specify Landmarks by
name or by co-ord &
geographical area.
Specify trigger events.

Receive alerts
when specified
events are
triggered.

app

app

app

Proximity
Server

Geometry
Engine

Phone OS
Location and Landmarks
APIs

OS components are
shaded

Figure 7

METHOD OF AUTOMATICALLY ALTERING THE BEHAVIOUR OF A WIRELESS INFORMATION DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a method of automatically altering the behaviour of a wireless information device. The term 'wireless information device' used in this patent specification should be expansively construed to cover any kind of device with one or two way communications capabilities and includes without limitation radio telephones, smart phones, communicators, personal computers, computers and application specific devices. It includes devices able to communicate in any manner over any kind of network, such as GSM or UMTS mobile radio, Bluetooth™, Internet etc.

2. Description of the Prior Art

There has been considerable work in recent years devoted to making wireless information devices, particularly mobile telephones, possess functionality that cannot be replicated using fixed devices. One unique characteristic of a wireless information device is that its location will alter; many innovations have centered on making the behaviour of the mobile telephone alter as its location changes: for example, reference may be made to PCT/US02/18671 to Nokia which describes adjusting the functions (e.g. profiles) of a mobile telephone depending on its location. This allows, for example, the mobile telephone to automatically change its behaviour to non-ringing if it is in a theatre, or to turn off RF functionality when by an aeroplane etc.

SUMMARY OF THE PRESENT INVENTION

In a first aspect of the present invention, there is a method of automatically altering the behaviour of a wireless information device, comprising the steps of:

5   (a)   enabling a user to define one or more criteria by selecting an item from a list of possible items displayed on the device;

       (b)   ·altering the behaviour of the device when that device satisfies the user defined criteria by causing the device to automatically send a user defined message to a user defined contact.

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Hence, this invention enables a message to be automatically sent if certain user defined criteria are met. The usefulness of this is best illustrated in a scenario in which the criteria comprises a location and the list is a list of locations. The user can then select a given location as the criteria much as one selects a 'bookmark' in a list of internet URLs.

15 For this reason, we shall refer to this as selecting a 'location bookmark'. Imagine now that Laura is on the train home from work. She has previously set a 'location bookmark' on her wireless information device associated with the town of Colchester, which is on her way home. This can be done by her defining a logical location 'Colchester' with a particular geographic location (and predefined zone around that location) established

20 using conventional location finding approaches – e.g. GPS or by manual user entry with WGS84 standard co-ordinates etc. She has also previously programmed her device so that when the device thinks it is in logical location 'Colchester' (using the conventional location finding approach(es)) it automatically sends a SMS text message to her husband Max saying "Passing through Colchester now". Max then knows to set off to collect her

25 from the next station.

Because the logical location Colchester is present in the list of possible criteria that can initiate a message to be sent, it is very easy for Laura to associate other actions with being in logical Colcehster, such as altering the device profile (e.g. ringing behaviour),

30 automatically diverting all calls to voice mail, updating her Presence information to reflect the new status 'coming home from work' etc. This can be done through a simple series of linked menu lists – e.g. a first list which displays the primary criteria (such as a list of different logical locations – work, home, user - named places etc) and a linked list

which shows a menü of possible actions to occur if the first criteria is met (e.g. send message to a user defined contact, forward calls to voice mail, update Presence in user defined manner, turn to silent mode etc.).

5   Location can typically be determined not only using a global or absolute reference frame. location finding system such as GPS or time of arrival systems but also a local or relative reference frame. location finding system, such as may be set up by short range RF transmitters (e.g. Bluetooth™ pods). Hence, a logical location 'Home' could be associated with a unique short range RF transmitter located at home. Then, for example,

10   a school child could have a device that was set to send a SMS ("Home now") to her working mother when the child arrives at logical location 'Home'.

The criteria may also relate to an entity in a contacts application or list on the device. Hence, the device could be set to automatically send a SMS to a pre-defined contact if

15   that contact's behaviour or Presence etc. met certain criteria: for example, consider the scenario in which Helen sets her device to send a SMS message to her husband Chris (e.g. "Please buy cinema tickets for tonight") automatically if Chris changes his Presence setting from 'Busy'.

20   This is also an example of the more general case of the criteria comprising a trigger event that must occur in order for the message to be sent.

The criteria may also comprise a validity time period during which the trigger event must occur in order for the message to be sent. For example, a SMS from Helen to Chris

25   might only occur if he changes his Presence setting from Busy prior to 7pm that day, since Helen knows that after that time it will be too late for Chris to buy the tickets anyway.

It is also possible to share and send criteria: the user defines the criteria by selecting an

30   item from a list of possible items displayed on a first wireless information device that is different from the device whose behaviour is to be altered; that criteria is then sent to the device whose behaviour is to be altered, which then alters its behaviour when it satisfies the criteria received from the first device. It does so by automatically sending a user

defined message to a user defined contact. For example, if a user loses his device, then he can define criteria that a device is to send its location to a device that the user can access and then disable itself; he then sends this instruction to his own, lost device, which promptly complies by sending its location back to the user and then disabling itself.

5

Ina second aspect, there is a wireless information device capable of automatically altering its behaviour, the device being programmed to:

(a)   enable a user to define one or more criteria by selecting an item from a list of possible items displayed on the device; and

· 10   (b)   alter its behaviour when the user defined criteria are satisfied by automatically sending a user defined message to a user defined contact.

In a third aspect, there is computer software which, when running on a wireless information device, enables the device to perform the method of the first aspect.

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